

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 86-33

REVISED WASTEWATER RECLAMATION REQUIREMENTS FOR:

CITY OF MOUNTAIN VIEW AND CITY OF PALO ALTO,
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. The City of Palo Alto (hereinafter called Producer and User), on behalf of itself and the City of Mountain View (hereinafter called a User), filed a Report of Waste Discharge dated February 20, 1986, for the use of reclaimed wastewaters.
2. The City of Palo Alto proposes to divert up to 2.0 million gallons per day (mgd) of tertiary-treated effluent from its Palo Alto Regional Water Quality Control Plant (Producer) and to further treat the effluent to acceptable levels at its Reclamation Facility for various reclaimed wastewater uses. The City of Palo Alto (User) plans to irrigate up to 0.8 mgd of reclaimed wastewaters at the Palo Alto Municipal Golf Course, the Bay Lands Athletic Center, the Rinconada Park, the Palo Alto Cultural Center, and Greer Park. Up to 1.2 mgd may be applied by the City of Mountain View, Shoreline At Mountain View (User), on its Shoreline Golf Course and and regional park areas. The Producer will provide good quality effluent treated to levels required in this Order. The Users will operate and maintain the transport and distribution pipelines which they own or for which they are responsible as shown in Figures 1, 2, and 3 (attached). Reclaimed wastewater will be irrigated by means of fixed sprinkler systems. Reclaimed wastewater will not be used in golf course or other ornamental ponds associated with the golf course or park facilities unless a satisfactory operation and maintenance plan is submitted. There is no current use of reclaimed wastewater since domestic supply water is presently used for irrigation and to fill ponds.
3. The Producer and Users will negotiate agreements defining responsibilities for treatment, distribution, and use of reclaimed wastewater.
4. The production and uses of reclaimed wastewater are currently permitted under Orders Nos. 73-71, 77-102, 81-46, and 81-59. Order No. 73-71 adopted by the Board on November 17, 1973, contains waste discharge requirements issued to the Santa Clara Valley Water District (SCVWD) for the direct injection of Palo Alto Regional Water Quality Control Plant (RWQCP) secondary-treated effluent into the upper aquifer of the Palo Alto Bayfront Area to form a hydraulic barrier to salt water intrusion. The SCVWD obtained a Clean Water Grant to construct a Reclamation Facility at the Palo Alto RWQCP for production of adequately treated reclaimed wastewaters. The SCVWD recently deeded over the Reclamation Facility to the City of Palo Alto and is no longer the owner of the facility. On September 16, 1981,

the Board issued an NPDES Permit (No. CA0038431) and waste discharge requirements contained in Order No. 81-46 for the discharge of extraction well wastewater into Mountain View Slough by the SCVWD in order to prevent any reclaimed wastewater injected (under Order No. 73-71) from mixing with aquifers suitable for domestic use. Order No. 81-46 expires on September 6, 1986. The SCVWD terminated use of the injection and extraction wells on October 5, 1982 and have since abandoned the wells. Order No. 77-102 adopted on July 19, 1977 by the Board prescribes wastewater reclamation requirements for golf course and landscape irrigation by the City of Palo Alto with treated effluent from the SCVWD's Reclamation Facility. This use took place for a short period of time prior to 1982 but was terminated when the SCVWD abandoned its reclaimed wastewater uses. Order No. 81-59 was adopted by the Board on November 18, 1981 prescribing wastewater reclamation requirements for use by the City of Mountain View at its shoreline regional park golf course. Reclaimed wastewater was used in golf course ponds for a short period of time prior to 1982 but was discontinued due to algal control problems. Golf course irrigation never occurred since the distribution system was not completed.

5. Section 13523 of the California Water Code provides that a regional board, after consulting with and receiving the recommendations of the State Department of Health Services, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water. The use of reclaimed water for the purposes specified in Finding 2, could affect the public health, safety, or welfare, and requirements for those uses are, therefore, necessary in accordance with the California Water Code.

This Order's requirements are in conformance with and implement the wastewater reclamation criteria of the California Department of Health Services (Title 23, Division 4, Sections 60301-60355 of the California Administrative Code) to protect the public health, safety and welfare.

6. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on July 21, 1982 prescribing water quality objectives for South San Francisco Bay and its tributaries. The Basin Plan identifies beneficial uses of the underlying ground waters as:

- Industrial service and process water supply
- Municipal and domestic supply
- Agricultural supply

7. The Basin Plan identifies beneficial uses of the surface waters of South San Francisco Bay and its tributaries as:

- Water contact recreation
- Non-contact water recreation
- Preservation of Rare and endangered species
- Fish spawning and migration
- Industrial service and process water supply
- Commercial and sport fishing
- Shellfish harvesting
- Estuarine habitat
- Wildlife habitat

8. Effluent limitations of this Order are based on the Basin Plan, State Plans and policies, current plant performance, and best engineering judgment. The limitations are considered to be those attainable by best available technology, in the judgment of the Board.
9. The proposed use of reclaimed wastewater involves a minor alteration to land and as such is exempt from the provisions of the Environmental Quality Act in accordance with Title 14, California Administrative Code, Chapter 3, Section 15104.
10. This Regional Board has notified the Users and the Producer, and interested agencies and persons of its intent to prescribe wastewater reclamation requirements for the proposed discharges and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
11. This Board at a public meeting heard and considered all comments pertaining to these discharges.

IT IS HEREBY ORDERED, that the City of Palo Alto (Producer and User) and the City of Mountain View, Shoreline at Mountain View (User), in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

A. Reclaimed Wastewater Use Specifications

1. The Producer shall assure that the treatment of reclaimed wastewater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. The Producer shall assure that the reclaimed wastewater for use on parks, playgrounds, schoolgrounds, or other areas where the public has similar exposure to reclaimed wastewater (i.e., golf courses with contiguous residential development) shall be at all times an adequately oxidized, coagulated, clarified, filtered, and disinfected water in accordance with Section 60313 of the Wastewater Reclamation Criteria (Title 23, Division 4 of the California Administrative Code) and shall not exceed the following quality limits at all times:

BOD (5-day, 20° C)	20 mg/l weekly average; 10 mg/l monthly average.
Suspended Solids	20 mg/l weekly average; 10 mg/l monthly average.
Dissolved Oxygen	1.0 mg/l minimum.
Dissolved Sulfide	0.1 mg/l maximum.
Coliform Organisms	Seven (7) day median number shall not exceed 2.2 per 100 milliliters of sample, and the 30-day maximum number shall not exceed 23 per 100 milliliters of sample.
Turbidity	2 NTU average operating turbidity, nor 5 NTU more than five (5) percent of the time during any 24-hour period.

3. The Producer shall assure that the reclaimed wastewater for use in golf courses not included in Specification 2 above, cemeteries, freeway landscapes, or other areas where the public has similar exposure shall be at all times an adequately oxidized and disinfected water in accordance with Section 60313 of the Wastewater Reclamation Criteria (Title 23, Division 4 of the California Administrative Code) and shall not exceed the following quality limits:

BOD (5-day, 20 ° C)	20 mg/l weekly average; 10 mg/l monthly average.
Suspended Solids	20 mg/l weekly average; 10 mg/l monthly average.
Dissolved Oxygen	1.0 mg/l minimum
Dissolved Sulfides	0.1 mg/l maximum
Coliform Organisms	Seven (7) day median number shall not exceed 23 per 100 milliliters of sample, and a maximum number of 240 per 100 milliliters of sample shall not be exceeded in more than any two consecutive samples.

4. The Users shall assure that all above ground equipment, including pumps, piping and valves, etc., which may at any time contain waste shall be adequately and clearly identified with posted notices to the public and managed in conformance with the California Department of Health Service "Guidelines for Use of Reclaimed Wastewater Irrigation and Impoundment" and "Guidelines for Worker Protection at Reclamation Use Areas." The Users shall make all necessary provisions to inform the public that the liquid contained is reclaimed wastewater is unfit for human consumption.
5. If an effluent or use requirement is violated, the Producer or User shall immediately terminate the discharge or use until the violation is corrected and measures are implemented to assure that it does not reoccur.

B. Reclaimed Wastewater Use Prohibitions

The User shall comply with the following restrictions for their use of reclaimed wastewater:

1. The distribution or reuse of reclaimed wastewater shall not create a nuisance as defined in Section 13050(m) of the California Water Code.
2. No reclaimed wastewater shall be applied to the irrigation or pond area during periods of rainfall such that runoff occurs or when soils are saturated.
3. No reclaimed wastewater used for irrigation shall be allowed to escape to areas outside the designated use areas in Finding 2 above by surface flow or airborne spray that causes surfaces of objects located offsite to become wet.
4. Reclaimed wastewater shall not be applied to park, golf course, or landscape areas as identified in Finding 2 above in such a manner or

at such times that may expose golfers, picknickers, or other individuals or that may cause picnic tables, and other food and drinking outlets to come into contact with airborne spray droplets.

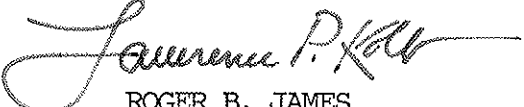
5. Discharge of reclaimed wastewater from the treatment facilities, the irrigation holding tanks, storage ponds, or other containment, other than to the irrigation system or to a municipal sewage collection system, is prohibited.
6. No reclaimed wastewater shall be discharged to golf course ponds, storage ponds, ornamental ponds, or other impoundment unless a letter requesting such use, including a satisfactory operation and maintenance plan, is submitted and receives prior written approval from the Executive Officer. After the first year of operation, the operation and maintenance plan shall be reviewed and revised, and the revisions, or a letter stating no revisions are necessary, shall be submitted to the Board annually thereafter.

C. Provisions

1. The Producer and Users shall comply with all sections of this Order immediately upon adoption. Compliance with all effluent limitations and discharge specifications and prohibitions is required when wastewater reclamation commences.
2. Orders Nos. 73-71, 77-102, 81-46, and 81-59 are hereby rescinded.
3. At least sixty days (60) prior to the use of reclaimed wastewater, the Producer and Users shall submit a report, satisfactory to the Executive Officer, describing the irrigation system design, storage, and operation to minimize public contact with reclaimed wastewater and in conformance with the attached California Department of Health Services' (DOHS) "Guidelines for Use of Reclaimed Water Irrigation and Impoundment" and "Guidelines for Worker Protection at Water Reclamation Use Areas." A copy of this report shall be submitted to the Department of Health Services for review and concurrent approval.
4. The Producer and Users shall comply with the self monitoring program as adopted by the Board and as may be amended by the Executive Officer.
5. The Producer and Users shall jointly file with the Regional Board technical reports on self-monitoring work performed according to the self-monitoring requirements adopted and attached herein.
6. The Producer and Users shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated April 1977 except items A.3, A.12, A.14, A.16, and B.2.
7. The Producer and Users shall permit the Regional Board or its authorized representative in accordance with California Water Code Section 13267(c):
 - a. Entry upon premises in which an effluent source is located or in which any required records are kept.

- b. Access to copy any records required to be kept under terms and conditions of this Order.
 - c. Inspection of any monitoring equipment or method required by this Order.
 - d. Sampling of any discharge.
8. The Producer and Users shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Producer or User to achieve compliance with the wastewater reclamation requirements.
9. This Board considers the User to be the agency primarily responsible for the wastewater reuse. Therefore, in the administration and enforcement of this Order, this Board will first pursue its administrative and/or legal remedies with the User. If, however, the Board finds that the User does not have the ability or willingness to take appropriate action, or if special, unusual circumstances arise that indicate that direct action should be taken against the Producer, this Board may pursue appropriate action against the Producer.
10. The Producer and Users jointly shall file with the Board a report of waste discharge at least one-hundred and eighty (180) days before making any material change or proposed change in the character, location, or volume of reuse.

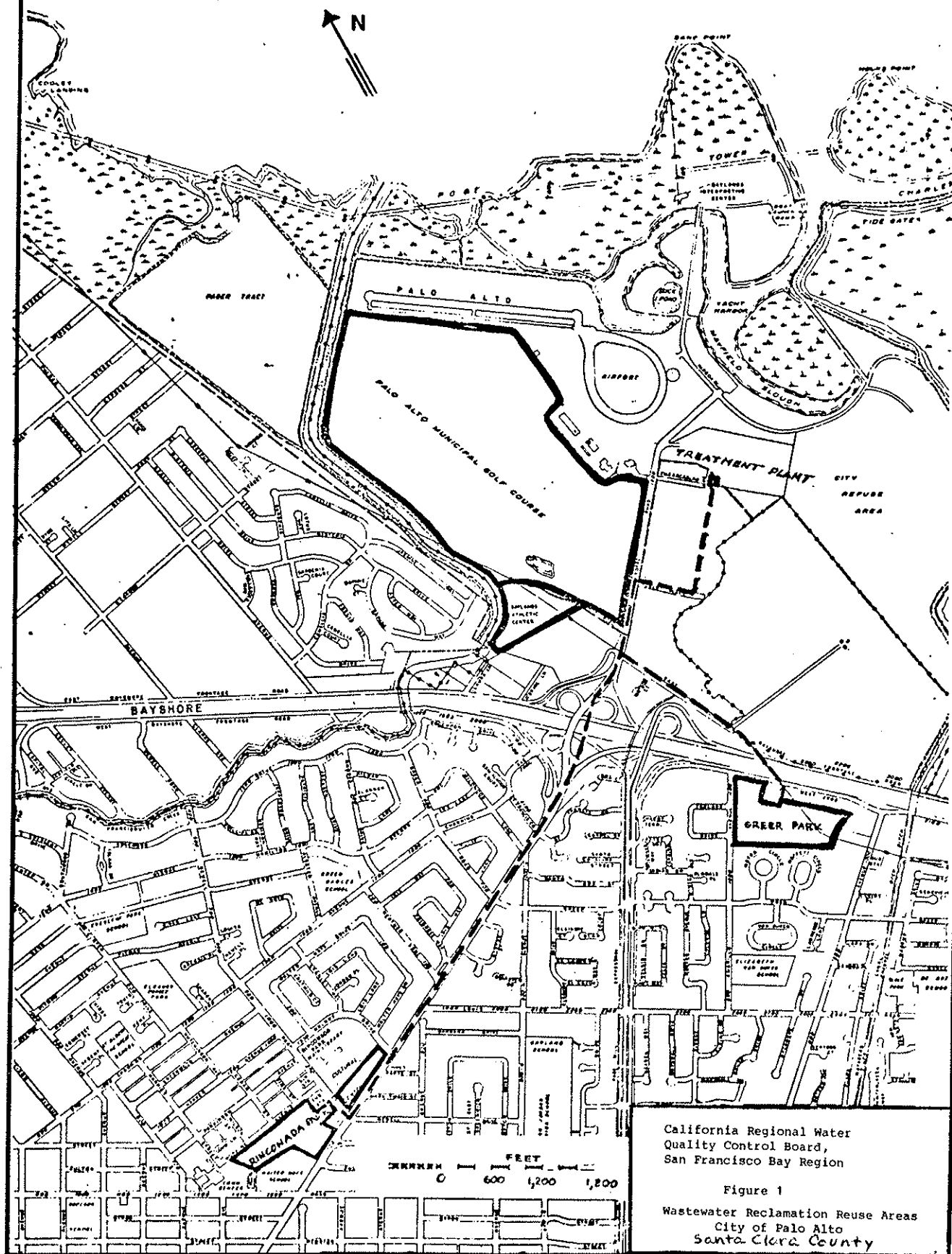
I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 21, 1986.


ROGER B. JAMES
Executive Officer

Attachments:

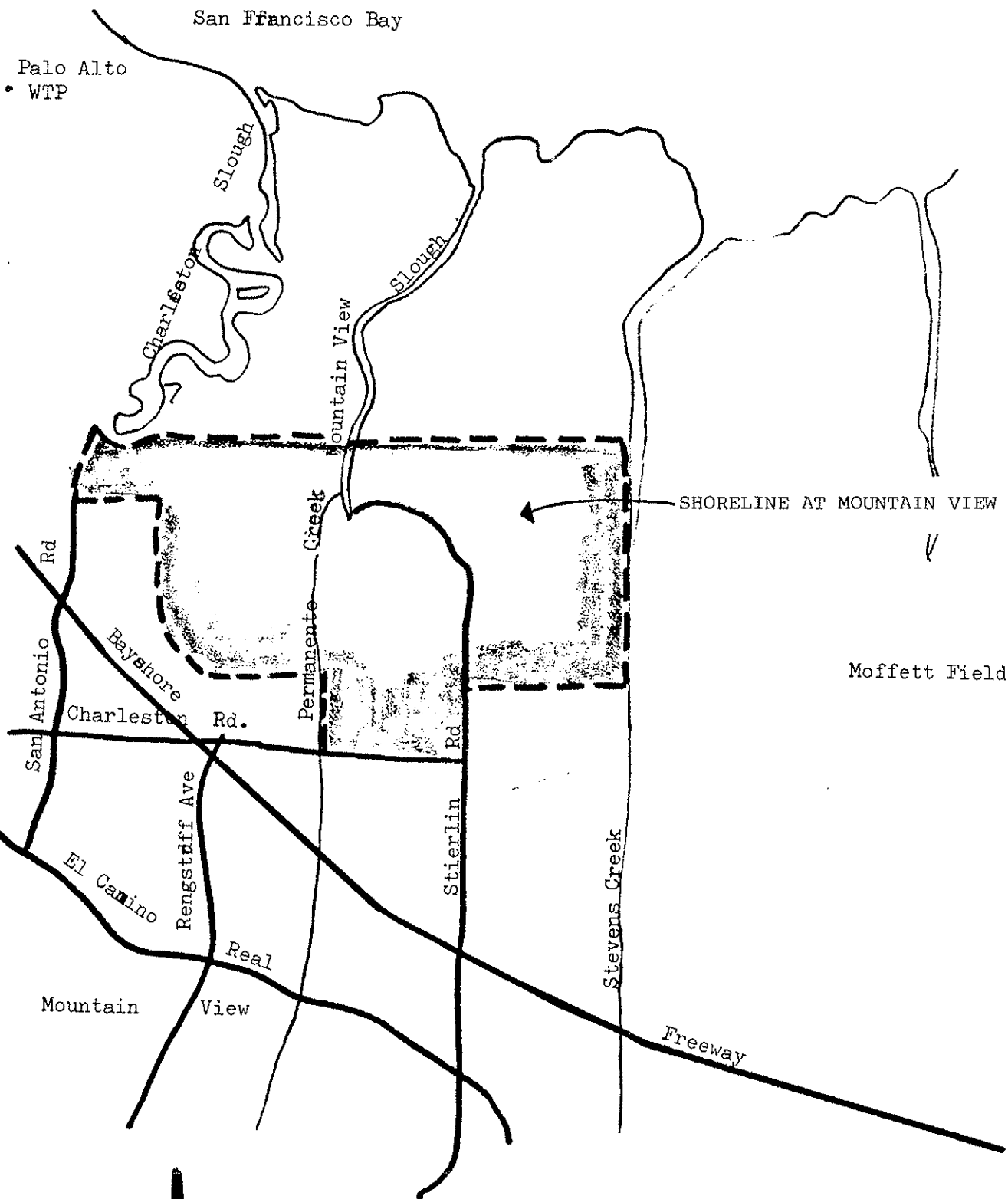
Figure 1 - Wastewater Reclamation Reuse Areas - City of Palo Alto
Figures 2 and 3 - Wastewater Reclamation Reuse Areas -
City of Mountain View, Shoreline At Mountain View
DOHS Guidelines for Use of Reclaimed Water Irrigation and Impoundment
DOHS Guidelines for Worker Protection at Water Reclamation Use Areas
Self-Monitoring Program
Standard Provisions, Reporting Requirements, April 1977

SAN FRANCISCO BAY



California Regional Water
Quality Control Board,
San Francisco Bay Region

Figure 1
Wastewater Reclamation Reuse Areas
City of Palo Alto
Santa Clara County



No Scale

STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION		
Figure 2		
Wastewater Reclamation Reuse Areas City of Mountain View, Shoreline At Mountain View Santa Clara County		
DRAWN BY:	DATE: 4/15/86	DRWG. NO.

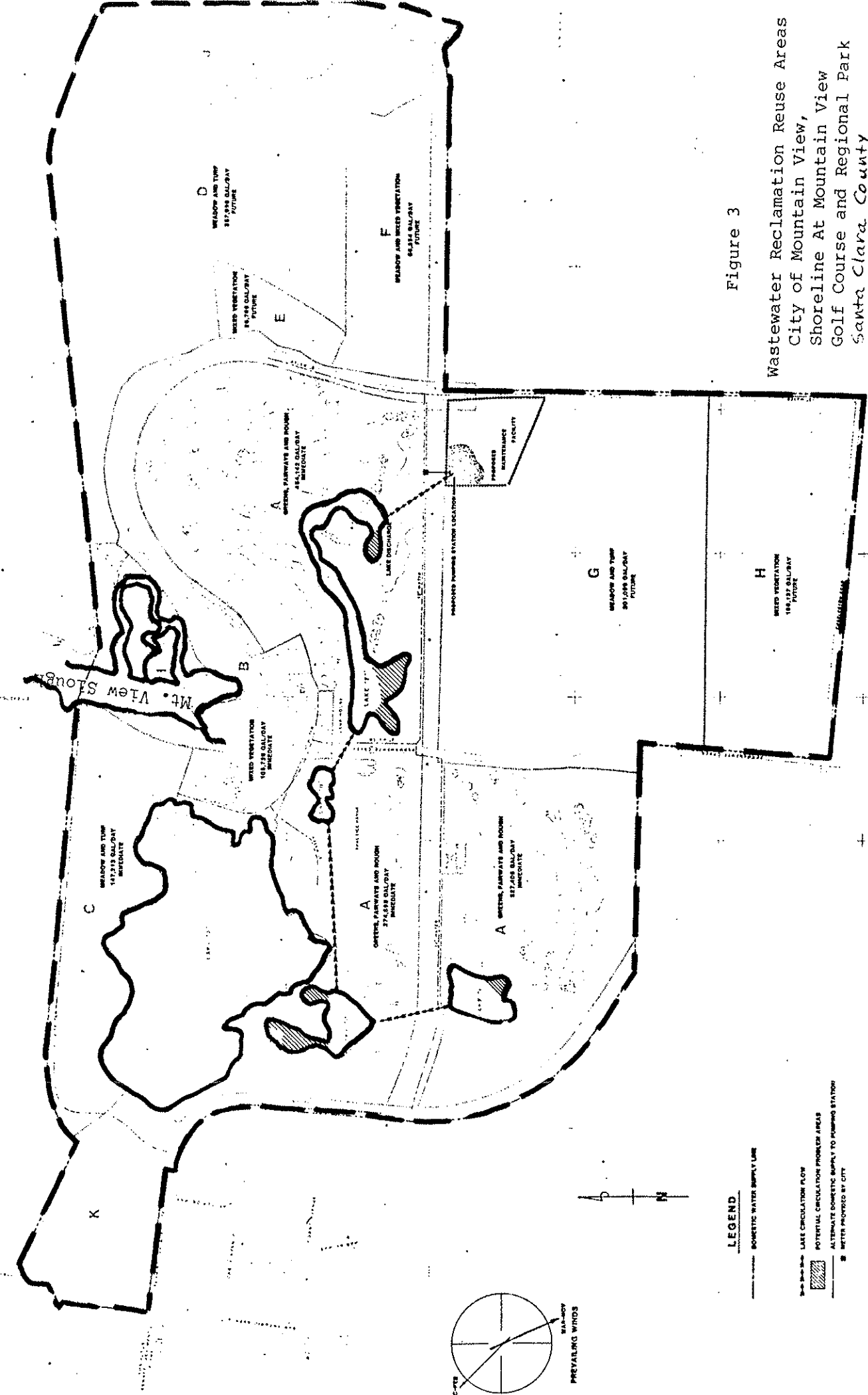


Figure 3
 Wastewater Reclamation Reuse Areas
 City of Mountain View,
 Shoreline At Mountain View
 Golf Course and Regional Park
 Santa Clara County

LEGEND

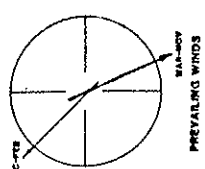
DOMESTIC WATER SUPPLY LINE

3-6 3-6 3-6 LAKE CIRCULATION FLOW

POTENTIAL CIRCULATION FLOW AREAS

ALTERNATE DOMESTIC SUPPLY TO PUMPING STATION

METER PROVIDED BY CITY



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

CITY OF MOUNTAIN VIEW AND
CITY OF PALO ALTO,
SANTA CLARA COUNTY

ORDER NO. 86-33

CONSISTS OF

PART A, dated January 1978

AND

PART B, Ordered May 21, 1986

PART B

I. DESCRIPTION OF SAMPLING STATIONS AND SCHEDULE OF SAMPLING, ANALYSES AND OBSERVATIONS

A. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall from the reclamation facilities between the reuse and the point at which all waste tributary to that outfall is present. (May be the same as E-001-D.)
E-001-D	At any point in the disinfection facilities for Waste E-001 at which point adequate disinfection is assured prior to discharge.

B. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
L-1 through L-'n'	Located along the periphery of the irrigation areas at drainage swales and at equidistant intervals, not to exceed 500 feet.

C. IMPOUNDMENT FACILITIES

<u>Station</u>	<u>Description</u>
P-1 through P-'n'	At points on the periphery of each golf course, storage, ornamental or other pond or impoundment; locations, including a map or sketch showing the locations of these stations, shall be specified in the lagoon management plan.

II. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling, analysis, and observations shall be that given in Table 1.

III. MODIFICATION OF PART A, DATED JANUARY 1978

Exclusions: C.3, C.4, 5.a, 5.c, D.3, and F.3.e.

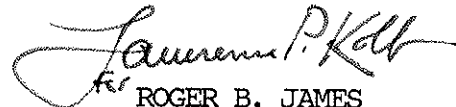
IV. MISCELLANEOUS REPORTING

The Producer is responsible for reporting all effluent (E-001) monitoring results. The Users are responsible for performing and reporting applicable irrigation area (L stations) and pond (P stations) monitoring results.

The Users shall prepare their reports in a timely fashion and submit them to the Producer. The Producer shall compile the reports, noting any violations of wastewater reclamation requirements and the dates and status of corrective actions, and submit the reports monthly to the Board. If no wastewater was reclaimed during the reporting period, the Producer shall submit a letter stating such.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 86-33.
2. Was adopted by the Board on May 21, 1986.
3. May be reviewed at any time subsequent to the adoption date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.


for
ROGER B. JAMES
Executive Officer

Attachments
Table 1 (two pages)

TABLE 1⁽¹⁾
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

Order No. 86-33

Sampling Station	E-001	All Sta.	All Sta.
TYPE OF SAMPLE	Grab C-24	O	G
Flow Rate (mgd)	D ⁽²⁾		
BOD, 5-day, 20°C (mg/l & kg/day)	W		
Chlorine Residual & Dosage (mg/l & kg/day)	D		
Settleable Matter (ml/1-hr. & cu. ft./day)	2/M		
Total Suspended Matter (mg/l & kg/day)	2/M		
Oil and Grease (mg/l & kg/day)	2/M		
Coliform (Total) (MPN/100 ml) per req't	(3) 5/W		
Fish Tox'y 96-hr. TL % Surv'l in undiluted waste			
Ammonia Nitrogen (mg/l & kg/day)			
Nitrate Nitrogen (mg/l & kg/day)			
Nitrite Nitrogen (mg/l & kg/day)			
Total Organic Nitrogen (mg/l & kg/day)			
Total Phosphate (mg/l & kg/day)			
Turbidity (Jackson Turbidity Units)	D ⁽⁴⁾		
pH (units)			
Dissolved Oxygen (mg/l and % Saturation)	W		
Temperature (°C)			
Apparent Color (color units)			
Secchi Disc (inches)			
Sulfides (if DO<5.0 mg/l) Total & Dissolved (mg/l)	W		
Arsenic (mg/l & kg/day)			
Cadmium (mg/l & kg/day)			
Chromium, Total (mg/l & kg/day)			
Copper (mg/l & kg/day)			
Cyanide (mg/l & kg/day)			
Silver (mg/l & kg/day)			
Lead (mg/l & kg/day)			

TABLE 1 (continued) (1)												
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS											Order No. 86-33	
Sampling Station	E-001		All Sta.	All Sta.								
TYPE OF SAMPLE	Grab	C-24	O	G								
Mercury (mg/l & kg/day)												
Nickel (mg/l & kg/day)												
Zinc (mg/l & kg/day)												
Phenolic Compounds (mg/l & kg/day)												
All Applicable Standard Observations			W	2/M								
Bottom Sediment Analyses and Observations												
Total Ident. Chlor. Hydrocarbons (mg/l & kg/day)												

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
 C-24 = composite sample - 24-hour
 C-X = composite sample - X hours
 (used when discharge does not continue for 24-hour period)
 Cont = continuous sampling
 DI = depth-intergrated sample
 BS = bottom sediment sample
 O = observation

TYPES OF STATIONS

I = intake and/or water supply stations
 A = treatment facility influent stations
 E = waste effluent stations
 C = receiving water stations
 P = POND stations/impoundment stations
 L = irrigation areas
 B = bottom sediment stations
 G = groundwaters stations

FREQUENCY OF SAMPLING

E = each occurrence
 H = once each hour
 D = once each day
 W = once each week
 M = once each month
 Y = once each year

2/H = twice per hour
 2/W = 2 days per week
 5/W = 5 days per week
 2/M = 2 days per month
 2/y = once in March and once in September
 Q = quarterly, once in March, June, Sept. and December

2H = every 2 hours
 2D = every 2 days
 2W = every 2 weeks
 3M = every 3 months
 Cont = continuous

NOTES

- (1) - Effluent samples are required to be collected on days any reclaimed wastewater is diverted for reuse.
- (2) - Daily flow volume of irrigation water pumped to each irrigation area shall be reported.
- (3) - Coliform monitoring shall increase to seven (7) days per week (7/W) when reclaimed wastewater is used in golf course ponds or other impoundment.
- (4) - Turbidity monitoring shall increase to hourly (or continuous) when reclaimed wastewater is used in golf course ponds or other impoundment.

Sequence	To	From
	RBJ	RBJ
	MAB	MAB
	LPK	LPK
	DMH	DMH
	GJG	GJG
PLANNING		
	RHW**	RHW**
	SRR*	SRR*
	DST	DST
	LF*	LF*
	PWJ	PWJ
	DCB	DCB
	MHK	MHK
TOXICS CLEANUP		
	DDD**	DDD**
	MJA*	MJA*
	RMB	RMB
	PCM	PCM
	RHC	RHC
INDUSTRIAL		
	HJS**	HJS**
	WKB*	WKB*
	BHW	BHW
	LWT	LWT
	AGL*	AGL*
	GRF	GRF
	KJT	KJT
	MDD*	MDD*
	TEM	TEM
	JEC	JEC
	LAH	LAH
	TS	TS
MUNICIPAL		
	TCW**	TCW**
	RJC*	RJC*
	RL	RL
	SAH	SAH
	ETH	ETH
	TGR	TGR
	GW	GW
	KWB	KWB
	DAM*	DAM*
	WT	WT
	SRL	SRL
SOUTH BAY		
	SIM**	SIM**
	FEJ*	FEJ*
	JLH	JLH
	DLH	DLH
	BAA	BAA
	RKM*	RKM*
	JYL	JYL
	RWM	RWM
	FXG	FXG
	TJB	TJB
	SDI	SDI

DATE OF ORIGIN:

5/27/86

DUE DATE:

Completed package from
Haw Bd. meeting

ADMINISTRATION

SEQUENCE #	PGS	TO	FROM
		VJW**	VJW**
		AJ	AJ
		EJ	EJ
		TMH	TMH
		DT	DT
		OT	OT
		CDC	CDC
SOUTH BAY DIVISION			
		HT	HT
		DF	DF

WORK ORDER

LETTERHEAD
MEMO RWQCB
INTERNAL MEMO
MEMO A-2
PLAIN PAPER
DRAFT
XEROX
FILE NO. 8186-8251
TASK NO. 100-02

SPECIAL INSTRUCTIONS:

ATTACHMENTS:

ENCLOSURES:

ROUTING:

MAILING:

COMPLETED BY:

DATE:

LIBRARY

CIRCULATING LIBRARY

BULLETIN BOARD

DATE:

DISCARD

FOLLOW-UP

DATE:

TO:

FILE(S)

NO. (S)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

SAN FRANCISCO BAY REGION

1111 JACKSON STREET, ROOM 6040

OAKLAND 94607

Phone: Area Code 415
464-1255Certified Mail No.
Return Receipt Requested

Date:

File: 2188.8051

Bill Nicks
Palo Alto WQCP
2501 Embarcadero Way
Palo Alto, CA 94303

NOTICE: The item(s) indicated by an "X" are enclosed herewith:

☒

- A. One certified copy of an Order adopted by the Board on the date shown therein.

☐

- B. Attachment to Order containing Requirements and Recommendations of other agencies.

☐

- C. One copy of Executive Officer Summary Report which was considered by the Board on the date shown therein. The Motion(s) recommended therein was (were) adopted by the Regional Board on that date.

☐

- D. Other -

Sincerely,

ROGER B. JAMES
Executive Officer